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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,989	03/12/2004	Gordon Yu	04135-URS	6883

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EXAMINER	
ZAMAN, FAISAL M	

ART UNIT	PAPER NUMBER
2112	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/798,989	YU ET AL.	
	Examiner	Art Unit	
	Faisal Zaman	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10-15* is/are rejected.

7)☒ Claim(s) *8 and 9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided**. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The disclosure is objected to because of the following informalities:

a. Applicant uses the terms "GPRS replaceable module communication device" and "GPRS card" interchangeably throughout the specification and claims without specifically stating that the terms can be used interchangeably.

b. Applicant refers to "a bus F_0 and a bus F_1" in paragraph 0012, line 7 (as well as other areas throughout specification), but fails to denote the reference number as shown in Figure 1 (reference numbers 111 and 112).

c. In paragraph 0003, line 6, replace "packet," with --packet**s**,--.

d. In paragraph 0018, line 1, replace "SDD" with --S**S**D--.

3. The use of the trademarks Bluetooth (paragraph 0013 line 3, and paragraph 0017 line 2) and Win98/2K/CE (paragraph 0019, line 20) have been

noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate corrections are required.

Drawings

4. The drawings are objected to because "black boxes" in Figure 1 should be accompanied with text labels describing what each "black box" is. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the switch chip (see Claims 8-15) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 1, 2, 7, 12, and 14 are objected to because of the following informalities:

Claim 1, in line 4, recites the term "a replaceable module" in place of "daughter board" as recited earlier in the claim. To increase clarity, the examiner suggests Applicant to replace "a replaceable module" with --the daughter board--.

Claim 1 recites the limitation "said GPRS card" in line 4. There is insufficient antecedent basis for this limitation in the claim. The examiner would interpret this term, for examination purposes, to mean "said GPRS replaceable module communication device".

Claim 1 recites the limitation "the control data" in lines 4 and 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites "GPRS" in lines 1, 2, and 4. Each of the terms of the acronym "GPRS" should be spelled out at the first occurrence of the acronym in the base claim of a group of claims.

Claim 2 recites "SSD" and "EEPROM" in line 2. Each of the terms of the acronyms "SSD" and "EEPROM" should be spelled out at the first occurrence of the acronyms in the base claim of a group of claims.

Claim 7 recites the limitation "said data controller" in line 1. There is insufficient antecedent basis for this limitation in the claim. The examiner would interpret this term, for examination purposes, to mean "said control data".

Claim 7 recites the limitation "said third bus" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 12 and 14, line 3, replace "said daughter is executed by a switch chip" with --said daughter **board** is executed by a switch chip--.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 7, 10, 11, and 12-13** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 7, Applicant recites the limitation "or said third bus to said controlling multiplexer". Based on the specification and drawing, it is not clear as to how the control data is transmitted from the daughter board to the controlling multiplexer directly through the third bus without going through the connector on the motherboard first. However, for examination purposes, the examiner would interpret this limitation to mean "wherein said control data is transmitted through said connector on said motherboard to said controlling multiplexer, or through a third bus directly to said controlling multiplexer".

Regarding Claim 12, it is not clear as to where the switch chip is located. The examiner would interpret this limitation, for examination purposes, to mean the switch chip is located on the motherboard.

All claims not specifically addressed are rejected due to a dependency.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. **Claims 1, 2, 4, and 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter, "AAPA") in view of Harari et al. ("Harari") (U.S. Patent No. 6,381,662).

Regarding Claim 1, AAPA discloses a GPRS module communication device, comprising a motherboard, wherein said motherboard has GPRS components (AAPA, paragraph 0005, lines 3-5).

AAPA does not expressly disclose wherein said GPRS module communication device comprises a daughter board which is a modularized add-on card, whose function is determined by a replaceable module, and said GPRS card determines either the control data on said motherboard, or the control data on said daughter board.

In the same field of endeavor (e.g. structures and configurations of a peripheral card being externally and removably coupled to a host system), Harari teaches a replaceable module communication device (Harari, Figure 1, item 100, Column 4, lines 25-36; Column 5, lines 6-9; and Column 6, lines 61-

64), comprising a motherboard (Harari, Figure 1, item 10, Column 6, lines 65-66) and a daughter board, wherein said motherboard has components (Harari, Figure 4, items 50-58, Column 7 line 65 – Column 8 line 23), which is a modularized add-on card (Harari, Figure 1, item 20, Column 6, lines 65-66), whose function is determined by a replaceable module (Harari, Column 8, lines 41-58, where a replaceable module is the daughter card [see claim objections above]), and said GPRS card determines either the control data on said motherboard (Harari, Column 7, lines 49-53), or the control data on said daughter board (Harari, Column 8, lines 41-58).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Harari's teachings of structures and configurations of a peripheral card being externally and removably coupled to a host system with the teachings of AAPA, for the purpose of providing a comprehensive expansion card that is adapted for use in a number of peripheral applications (see Harari, Column 3, lines 28-30).

Regarding Claim 2, AAPA discloses wherein said GPRS component comprises of a GPRS module (AAPA, paragraph 0005, line 4).

Harari discloses the following limitations, which AAPA does not expressly disclose:

Wherein said component comprises at least a controlling multiplexer (Harari, Figure 4, item 50, Column 8, lines 11-14, processor 50 performs the same functions as the controlling multiplexer in current application), an SSD

device bridge chip (Harari, Figure 4, item 56, Column 8, lines 9-11 and lines 20-23), an EEPROM (Harari, Figure 4, item 52, Column 8, lines 11-14), a first bus (Harari, Figure 4, see connection between item 30 through item 14 to item 56, Column 8, lines 20-23), a second bus (Harari, Figure 4, item 55, Column 8, lines 9-11), a third bus (Harari, Figure 4, see connection between items 56 and 58, Column 8, lines 17-20), and a connector (Harari, Figure 4, item 14, Column 8, lines 20-23).

The motivation that was utilized in the combination of Claim 1, super, applies equally as well to Claim 2.

Regarding Claim 4, Harari teaches wherein said control data of said motherboard is stored in said EEPROM (Harari, Column 7, lines 49-53).

Regarding Claim 12, Harari teaches wherein the operation of said controlling multiplexer to read either said control data on EEPROM of said motherboard, or said control data on said EEPROM on said daughter is executed by a switch chip (Harari, Figure 4, item 59, Column 8, lines 17-18).

Regarding Claim 13, Harari teaches wherein the operation of said switch chip is determined by the turning on or off the pins of said switch chip through the action of insertion or removal or said daughter board (Harari, Column 11, lines 63-67).

Claim Rejections - 35 USC § 103

11. **Claims 3, 5-7, and 14-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA-Harari as applied to Claim 1 above, in further view of Ohkubo et al. ("Ohkubo") (U.S. Patent No. 4,909,742).

AAPA-Harari discloses the device as claimed in Claim 1.

Regarding Claim 3, AAPA-Harari discloses wherein said daughter board comprises at least an EEPROM (AAPA-Harari, Figure 4, item 30) and a connector (AAPA-Harari, Figure 4, item 24, Column 7, lines 33-38).

AAPA-Harari does not expressly disclose where said daughter board comprises at least an EEPROM, a connector, and further comprises at least one of the following three: a battery set, a memory card slot, or a Bluetooth module.

In the same field of endeavor (e.g. expansion cards and mating sockets of free insertion and withdrawal capability), Ohkubo discloses a daughter board (Ohkubo, Figure 1, item 10, Column 2, lines 27-31, ie. IC card) comprising an EEPROM (Ohkubo, Figure 2, item 15", Column 2, lines 27-31), a connector (Ohkubo, Figure 1, item 13, Column 2, lines 48-62), and further comprises at least one of the following three: a battery set (Ohkubo, Figure 1, item 14, Column 2, lines 27-31), a memory card slot, or a Bluetooth module.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Ohkubo's teachings of expansion cards and mating sockets of free insertion and withdrawal capability to the teachings of AAPA-Harari, for the purpose of having a plurality of

functional components on a single card (see Ohkubo, Column 1, lines 23-33). AAPA-Harari also provides motivation to combine by stating it is an object of the invention to provide a comprehensive expansion card that is adapted for use in a number of peripheral applications (see Harari, Column 3, lines 28-30).

Regarding Claim 5, AAPA-Harari teaches wherein said control data of said daughter board is stored in said EEPROM (Harari, Column 7, lines 33-36 and Column 8, lines 14-17).

Regarding Claim 6, AAPA-Harari teaches wherein said control data is transmitted through said connector on said motherboard, said first bus, said SSD device bridge chip (Harari, Figure 4, item 56), said second bus (Harari, Figure 4, item 55), to said controlling multiplexer (Harari, Figure 4, item 50, Column 8, lines 9-23).

Regarding Claim 7, AAPA-Harari teaches wherein said data controller transmitted through said connector on said motherboard (Harari, Column 8, lines 9-17), or said third bus to said controlling multiplexer. The prior art reference used for the rejection of this particular limitation is based on the examiner's assumption as discussed above.

Regarding Claim 14, AAPA-Harari teaches wherein the operation of said controlling multiplexer to read either said control data on EEPROM of said

motherboard, or said control data on said EEPROM on said daughter is executed by a switch chip (Harari, Figure 4, item 59, Column 8, lines 17-18).

Regarding Claim 15, AAPA-Harari teaches wherein the operation of said switch chip is determined by the turning on or off the pins of said switch chip through the action of insertion or removal or said daughter board (Harari, Column 11, lines 63-67).

Allowable Subject Matter

12. **Claims 8 and 9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. **Claims 10 and 11** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not include a switch chip that has the ability to alter the transmission path of control data from a daughter card to a motherboard.

Prior Art of Record

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoki (U.S. Patent No. 5,438,359) discloses an electronic camera system using IC memory card. Pecone et al. (U.S. Patent No.

5,611,057) discloses a computer system modular add-in daughter card for an adapter card which also functions as an independent add-in card. Erola et al. (U.S. Patent No. 6,092,133) discloses a method for conveying control commands for SIM card from external apparatus to SIM card. Chakrabarti et al. (U.S. Patent No. 6,678,281) discloses a hardware configuration, support node and method for implementing general packet radio services over GSM. Durand et al. (U.S. Patent Publication No. 2004/0010648) discloses a method for making secure access to a resident application on a user card co-operating with communication system terminal, and corresponding terminal. Kim et al. (U.S. Patent Publication No. 2004/0090539) discloses a digital camera and method for saving digital image. Cheng et al. (U.S. Patent No. 6,755,343) discloses an electronic card capable of changing communication functionality of a coupled electronic device. Tanaka et al. (U.S. Patent No. 6,769,045) discloses a PCI expansion adapter with PC card slot and electronic apparatus provided with the same. Anderson (U.S. Patent No. 6,833,867) discloses a method and system for expanding the hardware capabilities of a digital imaging device. Robertson (U.S. Patent No. 6,892,263) discloses a system and method for hot swapping daughtercards in high availability computer systems. Harari et al. (U.S. Patent Publication No. 2005/0198424) discloses a universal non-volatile memory card used with various different standard cards containing a memory controller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faisal Zaman whose telephone number is

571-272-6495. The examiner can normally be reached on Monday thru Friday, 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

fmz

Khanh Dang
Primary Examiner